REMARKS / DISCUSSION OF ISSUES

The present amendment is submitted in response to the Office Action mailed September 3, 2009. In view of the remarks to follow, reconsideration and allowance of this application are respectfully requested.

Status of Claims

Claims 1-8, 10-12 and 14-21 remain in this application. Claims 1 and 12 have been amended. Claim 9 has been cancelled. The claims are not believed to be narrowed in scope and no new matter is added.

Claim Rejections under 35 USC 102

In the Office Action, Claims 1–2, 4 and 18-21 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,051,340 ("Tyan"). Applicants respectfully traverse the rejections.

Claims 1-2, 4 and 18-21 are allowable

Independent Claim 1 has been amended herein to better define Applicant's invention over Tyan. Claim 9 is herewith cancelled, without prejudice, and claim 1 has been amended to incorporate the subject matter of now-cancelled claim 9. Claim 12 is herewith amended, and claim 1 has been amended to incorporate the cancelled subject matter of now amended Claim 12. It is respectfully submitted that independent Claim 1, as herewith amended, now recites limitations and/or features which are not disclosed by Tyan. Therefore, the cited portions of Tyan do not anticipate claim 1, because the cited portions of Tyan do not teach every element of claim *1*. For example, the cited portions of Tyan do not disclose or suggest, "*wherein the recording stack further comprises a protection layer adjacent the information layer at a side most remote from the substrate wherein said protection layer comprises an organic material, in particular selected from the group* ***Diazonaphthoquinone-based photoresists***", as recited in claim 1 [Emphasis Added]. In contrast to claim 1, it is admitted by the Office that Tyan do not disclose a protection layer adjacent the information layer at a side most remote from the substrate wherein said protection layer comprises an organic

material, in particular selected from the group **Diazonaphthoquinone-based photoresists**. See the rejection of Claim 12 at page 4 of the Office Action. In the rejection of Claim 12, the Examiner cites secondary reference, i.e., Japanese laid-out patent JP 06-060440 for disclosing a protective layer formed of PMMA. However, the rejection of claim 12 does not cite a reference for disclosing a protective layer formed of **Diazonaphthoquinone-based photoresists.** It is therefore respectfully submitted that the combination of Tyan and JP 06-060440 fail to disclose or suggest, "*wherein the recording stack further comprises a protection layer adjacent the information layer at a side most remote from the substrate wherein said protection layer comprises an organic material, in particular selected from the group* ***Diazonaphthoquinone-based photoresists***", as recited in claim 1 [Emphasis Added]. Therefore, claim 1 is allowable and claims 2 and 4 are allowable, at least by virtue of their respective dependence from claim 1.

In the Office Action, claim 18 is rejected over Tyan. The Examiner directs the Applicant to the examples provided in Tyan for allegedly teaching the method steps enumerated in claim 18.

As argued in Applicant's previous response, and reiterated herein, the Applicant has argued with painstaking specificity, particular reasons why the elements of claim 18 are neither taught or suggested by Tsyon. Accordingly, Applicant respectfully re-asserts that the particular recitations of claim 18 are clearly not met for at least the reasons stated below. In the Office Action, the rejection merely asserts that Tyson teaches that a phase change material is exposed in a pattern (to form pits and grooves), developed with an alkali, nickel-plated, and formed into a stamper. However, it is submitted that the method steps of Claim 18 recite manufacturing steps

Claim 18 recites five (5) steps for manufacturing a stamper for replication a high-density relief structure. These steps include (1) an illuminating step, (2) a rinsing step, (3) a sputter-deposition step, (4) a step of galvanically growing the sputter deposited layer and (5) a separating step.

Specifically, Claim 18 recites

- *illuminating a master substrate as claimed in claim 1 with a modulated focused radiation beam,*
- *rinsing the illuminated master substrate layer with a developer, being one of analkaline or an acid liquid, preferably selected of the group of solutions of NaOH, KOH, HCL and HNO3 in water, such that a desired relief structure results,*
- *sputter-deposition of a metallic layer, in particular a Nickel layer,*
- *galvanically growing the sputter-deposited layer to the desired thickness forming a stamper,*
- *separating the master substrate from the stamper.*

It is respectfully submitted that Tyan does not teach at least the second step of *rinsing the illuminated master substrate layer with a developer**, being one of analkaline or an acid liquid, preferably selected of the group of solutions of NaOH, KOH, HCL and HNO3** in water, such that a desired relief structure results.* Instead, Tyan teaches in accordance with the first and second examples, that the disk is rinsed in **distilled water**. Tyan teaches in accordance with the third example that the disk is rinsed sequentially in a 0.05 wt % Triton X-100 solution and in distilled water. Tyan teaches in accordance with the remaining examples that the disk is rinsed sequentially in various weights (e.g., 0.025, 0.05) wt % of **a Fluorad FC-99 solution and in distilled water.** Thus, Applicant submits that Tyan does not teach at least the step of: *rinsing the illuminated master substrate layer with a developer, being one of analkaline or an acid liquid, preferably selected of the group of solutions of NaOH, KOH, HCL and HNO3 in water, such that a desired relief structure results.*

Further, it is respectfully submitted that Tyan also does not teach at least the step of: *sputter-deposition of a metallic layer, **in particular a Nickel layer**.* Tyan teaches in accordance with the first example that a thin-film, about 70 nm in thickness on a glass support, of Sb-Sn-In alloy with atomic composition of 60%-25%-15% was prepared by RF-sputtering. Tyan also teaches in accordance with the ninth example that the polymer-coated disk replicate then had a thin film of the Sb-Sn-In alloy sputtered onto it to provide reflectivity and conductivity for subsequent optical microscopy and SEM observation. Thus, Applicant submits that this step is neither disclosed nor suggested by Tyan.

Applicant further submits that Tyan does not teach at least the step of: *galvanically growing the sputter-deposited layer to the desired thickness forming a stamper, sputter-deposition of a metallic layer, in particular a Nickel layer.* It is respectfully submitted that Tyan is silent with regard to this step.

Applicant further submits that Tyan does not teach at least the step of *separating the master substrate from the stamper.* Tyan discloses in part with regard to example 9 that "the polymer film was crosslinked via UV exposure and the disks were separated at the metal alloy:polymer interface. Applicant submits that the separation taught in **Tyan is not directed to separating the master substrate from the stamper.** Thus, Applicant submits that this step is neither disclosed nor suggested by Tyan.

Accordingly, since the cited reference does not disclose or suggest the steps of:

- *rinsing the illuminated master substrate layer with a developer, being one of analkaline or an acid liquid, preferably selected of the group of solutions of NaOH, KOH, HCL and HNO3 in water, such that a desired relief structure results,*
- *sputter-deposition of a metallic layer, in particular a Nickel layer,*
- *galvanically growing the sputter-deposited layer to the desired thickness forming a stamper,*
- *separating the master substrate from the stamper.*

as recited by Applicant's Claim 18, it is respectfully requested that the rejection under 35 USC 102(b) with respect to independent Claim 18 be withdrawn.

Further, since claims 19-21 are dependent on Claim 18, they too are believed to be patentably distinct over Tyan for at least the reasons given above for Claim 18. Accordingly, it is respectfully requested that the rejection under 35 USC 102(b) with respect to dependent Claims 19-21 be withdrawn.

Claim 3 is allowable

In the Office Action, Claim 3 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Tyan. Applicants respectfully traverse the rejection.

As explained above, the cited portions of Tyan do not disclose or suggest each and every element of claim 1 from which claim 3 depends. Assuming *arguendo* that it is obvious to vary the amounts of the elements in the alloy to provide the optimal recording results, it is respectfully submitted that claim 3 is allowable at least by virtue of its respective dependence from claim 1.

Claims 5, 8-11 and 13-14 are allowable

In the Office Action, Claims 5, 8-11 and 13-14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tyan in view of U.S. Patent No. 5,051,340 ("DePuydt"). Applicants respectfully traverse the rejections.

As explained above, the cited portions of Tyan do not disclose or suggest each and every element of claim 1 from which claims 5, 8-11 and 13-14 depend. DePuydt does not disclose each of the elements of claim 1 that are not disclosed by Tyan. Thus, the cited portions of Tyan and DePuydt, individually or in combination, do not disclose or suggest "*wherein the recording stack further comprises a protection layer adjacent the information layer at a side most remote from the substrate wherein said protection layer comprises an organic material, in particular selected from the group* ***Diazonaphthoquinone-based photoresists***", as recited in claim 1 [Emphasis Added].

Hence, for at least the same reasons given for Claims 1, Claims 5, 8-11 and 13-14 are believed to recite statutory subject matter under 35 USC 103(a) and claims 5, 8-11 and 13-14 are allowable, at least by virtue of their respective dependence from claim 1.

Claims 6-7 are allowable

In the Office Action, Claims 6-7 stand rejected under 35 U.S.C. §103(a)

as being unpatentable over Tyan in view of U.S. Patent No. 4,732,844 ("Ota"). Applicants respectfully traverse the rejections.

As explained above, the cited portions of Tyan do not disclose or suggest each and every element of claim 1 from which claims 6-7 depend. Ota does not disclose each of the elements of claim 1 that are not disclosed by Tyan. Thus, the cited portions of Tyan and Ota, individually or in combination, do not disclose or suggest "*wherein the recording stack further comprises a protection layer adjacent the information layer at a side most remote from the substrate wherein said protection layer comprises an organic material, in particular selected from the group* ***Diazonaphthoquinone-based photoresists***", as recited in claim 1 [Emphasis Added].

Hence, for at least the same reasons given for Claims 1, Claims 6-7 are believed to recite statutory subject matter under 35 USC 103(a) and claims 6-7 are allowable, at least by virtue of their respective dependence from claim 1.

Claim 12 is allowable

In the Office Action, Claim 12 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Tyan in view of JP 06-060440. Applicants respectfully traverse the rejection.

As explained above, the cited portions of Tyan do not disclose or suggest each and every element of claim 1 from which claim 12 depends. JP 06-060440 does not disclose each of the elements of claim 1 that are not disclosed by Tyan. Thus, the cited portions of Tyan and JP 06-060440, individually or in combination, do not disclose or suggest "*wherein the recording stack further comprises a protection layer adjacent the information layer at a side most remote from the substrate wherein said protection layer comprises an organic material, in particular selected from the group* ***Diazonaphthoquinone-based photoresists***", as recited in claim 1 [Emphasis Added].

Hence, for at least the same reasons given for Claims 1, Claim 12 is believed to recite statutory subject matter under 35 USC 103(a) and claim 12 is allowable, at least by virtue of its respective dependence from claim 1.

Claims 15-17 are allowable

In the Office Action, Claims 15-17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tyan in view of U.S. Patent No. 6,709,801 ("Miyamoto"). Applicants respectfully traverse the rejections.

As explained above, the cited portions of Tyan do not disclose or suggest each and every element of claim 1 from which claims 15-17 depend. Miyamoto does not disclose each of the elements of claim 1 that are not disclosed by Tyan. Thus, the cited portions of Tyan and Miyamoto, individually or in combination, do not disclose or suggest, "*wherein the recording stack further comprises a protection layer adjacent the information layer at a side most remote from the substrate wherein said protection layer comprises an organic material, in particular selected from the group* ***Diazonaphthoquinone-based photoresists***", as recited in claim 1 [Emphasis Added].

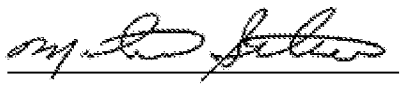
Hence, for at least the same reasons given for Claims 1, Claims 15-17 are believed to recite statutory subject matter under 35 USC 103(a) and claims 15-17 are allowable, at least by virtue of their respective dependence from claim 1.

Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely, Claims 1-8, 10-12 and 14-21 are believed to be in condition for allowance and patentably distinguishable over the art of record.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call Mike Belk, Esq., Intellectual Property Counsel, Philips Electronics North America, at 914-945-6000.

Respectfully submitted,



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